



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/679,526	10/06/2003	Kenji Kurisu	Furuta Case 39	3970

23474 7590 02/15/2005

FLYNN THIEL BOUTELL & TANIS, P.C.
2026 RAMBLING ROAD
KALAMAZOO, MI 49008-1699

EXAMINER

ZEMEL, IRINA SOPJIA

ART UNIT	PAPER NUMBER
----------	--------------

1711

DATE MAILED: 02/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/679,526	KURISU ET AL.	
	Examiner	Art Unit	
	Irina S. Zemel	1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>2/9/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 14 and 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 14 recites a method for preparing a cellular rubber material and then immediately recites a product-by-process limitation, without reciting any steps of the claimed process. The claim is confusing as it is not apparent whether the claim is a product-by-process, or a product claim, or it is a process claims. If latter is the intended case, the claim should be re-written to positively recite the process steps.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2 and 4-6 are rejected under 35 U.S.C. 102(b) as being anticipated by GB Patent 1 477 825 to BASF (hereinafter "BASF"), or US Patent 4,384,049 to Rametsteiner (hereinafter "Rametsteiner"), or US Patent 3, 819,543 to Stasny et al., (hereinafter "Statsny"), or JP 06-007220 to Shinetsu Polymer CO, (hereinafter "Shinetsu").

Each of the cited reference discloses a cellular rubber material comprising (A) 100 parts by mass of polymer which contains 30 to 100 % by mass of chlorinated polyethylene (CPE) with chlorine content corresponding to the chlorine content as per claim 3, (B) 1 to 30 parts by mass of organic blowing agent, and (C) 0.1 to 10 parts by mass of organic peroxide. See example 3 of BASF, example in column 4 of Stasny, abstract of Shinetsu and illustrative examples of Rametsteiner. Each of the references further discloses the decomposition temperature of the blowing agent which fully correspond the claims temperature. Shinetwu reference further expressly discloses one-minute-half life temperature T2 of the organic peroxide (C) that fully correspond to the claimed temperature. See [009]. The reference dos not address a relationship between the decomposition temperature T1 of organic blowing agent (B) and the one-minute-half life temperature Tz of organic peroxide (C), however the references expressly disclose specific organic blowing agents (B) and organic peroxides (C) that are identical to the materials listed and used by the applicants in the instant application. Therefore, the claimed temperatures and temperature relationships are inherently met by the materials disclosed in the references. The invention as claimed, therefore, is fully anticipated by each of the above cited references.

Claims 7-9, 11-12 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Stastny or Rametsteiner.

Both references further disclose cellular rubber material prepared by extrusion-molding into a predetermined shape (granules or ribbon), heating, crosslinking and foaming a rubber composition comprising (A) 100 parts by mass of polymer which

contains 30 to 100 % by mass of polar group-substituted polymer, (B) 1 to 30 parts by mass of organic blowing agent, and (C) 0.1 to 10 parts by mass of organic peroxide.

As discussed above, all of the characteristics of the claimed starting materials are disclosed in the references and correspond to the claimed characteristics. Note that for the purposes of rejection of claim 14, the applicants are afforded the benefit of a doubt and the claim is interpreted as a process claim positively claiming all of the recited steps as follows:

(14. A method for preparing a cellular rubber material comprising the steps of:
extrusion-molding into a predetermined shape,
heating,
crosslinking and
foaming a rubber composition comprising (A) 100 parts by mass of
polymer which contains 30 to 100 % by mass of polar group-substituted
polymer, (B) 1 to 30 parts by mass of organic blowing agent, and (C) 0.1 to
10 parts by mass of organic peroxide.)

The invention as claimed, is, therefore, fully anticipated by each of the cited references.

Claim Rejections - 35 USC § 102/103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

Art Unit: 1711

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7-8 and 11-13 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over BASF (hereinafter "BASF"), or JP 06-007220 to Shinetsu Polymer CO, (hereinafter "Shinetsu").

The disclosure of both references is discussed above. The process for producing of the materials disclosed in the references does not involve the extrusion step or the step of microwave heating. However, claims 7-8 and 11-13 are directed to the product (obtained by a specified process) and not the process. As such, the claims are met by any product obtained by any method so long as the product disclosed in the references is identical to the claimed product. In the instant case, it is believed that the product disclosed in both reference is identical to the claimed product since shaping by a method different from extrusion and heating by means different from microwave energy will result in the product with same characteristics. The burden is shifted to applicants to provide factual evidence to the contrary.

Claim Rejections - 35 USC § 103

Claim 3 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over BASF (hereinafter "BASF"), or US Patent 4,384,049 to Rametsteiner (hereinafter "Rametsteiner"), or US Patent 3, 819,543 to Stasny et al., (hereinafter "Statsny"), or JP 06-007220 to Shinetsu Polymer CO, (hereinafter "Shinetsu") alone or in combination with US Patent 5,041,329 to Tojo et al (hereinafter "Tojo").

The disclosure of each of the cited references is discussed above. The references do not expressly disclose the Money viscosity of the suitable chlorinated polypropylenes thus implying that CPE of any Mooney viscosity (M) are suitable for the disclosed inventions absent showing of unexpected results that can be attributed to the claimed M characteristic of the CPE. CPE with M characteristic corresponding to the claimed CPE is well known in the art and used for various thermoplastic compositions, including compositions for cellular material, as evidence by Tojo, column 5, lines 49-62. Thus, as discussed above, use of CPE that exhibit the claimed M parameter would have been obvious absent showing of unexpected results that can be attributed to the claimed M characteristic of the CPE.

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stastny or Rametsteiner in combination with applicants own disclosure (admitted prior art) or US Patent 5,242,634 to Matsumoto et al (hereinafter "Matsumoto").

Again, for the purposes of this rejection, claim 15 is interpreted as a process claim. The disclosure of Stastny or Rametsteiner references is discussed above. The references do not disclose the step of heating the material by means of microwave irradiation. Heating expandable compositions with microwave irradiation is known in the art, as admitted on page 2, first full paragraph of applicants specification, or as disclosed, for example, by Matsumoto to effect the ratio of open cells in the final foamed product. Therefore, heating expandable compositions disclosed in Stastny or Rametsteiner with microwave irradiation would have been obvious for the reasons of obtaining foams with the desired open cell content.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Irina S. Zemel whose telephone number is (571)272-0577. The examiner can normally be reached on Monday-Friday 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571)272-1078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Irina S. Zemel
Examiner
Art Unit 1711



ISZ

Application/Control Number: 10/679,526
Art Unit: 1711

Page 8